MARKOV, N.N.; TAYTS, B.A., doktor tekhn. nauk, retsenzent;
TUCHKOVA, L.K., inzh., red.

[Gear-tooth measuring instruments; foreign experience]
Zuboizmeritel'nye pribory; inostrannyi opyt. Moskva,
Mashinostroenie, 1965. 165 p. (MIRA 18:5)

TAYTS, Boris Lazarevich; RUSSO, V.L., red.

[Modern techniques and equipment for the arc welding of aluminum structures] Sovremennaia tekhnologiia i oborudovanie dlia dugovoi svarki alliuminievykh konstruktsii; stenogramma lektsii. Leningrad, 1964. 41 p. (MIRA 17:7)

TAYTS, Boris Lazarevich; FOLISHCHUK, G.V., red.

[Modern arc welding equipment] Sovremennoe oborudovanie dlia dugovoi svarki. Leningrad, 1965. 37 p. (MIRA 18:10)

ACC NR: AP7002587 (A, N) SOURCE CODE: UR/0413/66/000/023/0081/0081

INVENTORS: Karpov, V. G.; Lebedev, V. V.; Tayts, D. A.

ORG: none

TITLE: Compensation device for a thermocouple. Class 42, No. 189179 [announced by Special Design Bureau of Semiconductor Devices (Spetsial'noye konstruktorskoye byuro poluprovodnikovykh priborov)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 81

TOPIC TAGS: thermocouple, temperature measurement

ABSTRACT: This Author Certificate presents a compensation device for a thermocouple, containing an additional thermocouple and a compensation unit for the thermal flux flowing along the thermocouple from the sample. One of the thermoelectrodes of the additional thermocouple is connected to the thermojunction of the thermocouple to be compensated. To reverse the process of cooling and heating of the thermoelectrodes of the measuring thermocouple and to compensate thermal fluxes along this thermocouple in both directions, the compensation unit for the thermal flux is in the form of a semiconductor thermoelement in thermal contact with the thermocouple and connected to a current source (see Fig. 1).

UDC: 536.532

Card 1/2

ACC NR: AP7002587

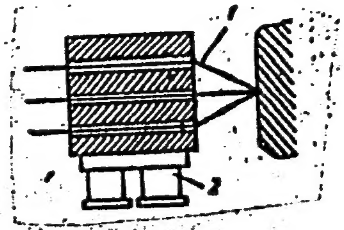


Fig. 1. 1 - measuring thermocouple;
2 - thermoelement

Orig. art. has: 1 diagram.

SUB CODE: 13, 14/ SUBM DATE: 25Jan65

Card 2/2

Tayts, G. S.

5.3300

78069
SOV/62-60-1-15/37

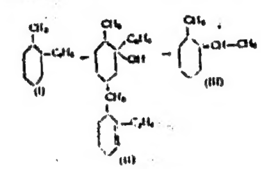
AUTHORS: Alekuanyan, V. T., Sterin, Kh. Ya., Liberman, A. L., Lukina, M. Yu., Tayts, G. S., Tarasova, G. A., Terent'eva, Ya. M.

TITLE: Investigation of Hydrocarbons by Optical Method. XII. Raman Spectra of Some Hydrocarbons of Various Series

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, Nr 1, pp 84-89 (USSR)

ABSTRACT: The Raman spectra of the following hydrocarbons were studied: n-dodecane; 5,5-dimethylundecane; 1,1,2-trimethylcyclopropane; sec-butylcyclopentane, 2-cyclopentylmethylcyclopropane; n-propylcyclohexane, 1-methyl-2-ethylcyclooctane, n-propylcyclo-hex-1-ene. Combination of the chemical and spectroscopic data confirm that 1,2-dialkylcyclohexan-1-ol on dehydration yields 1,2-dialkylcyclohexenes with double bond predominantly in position (I).

Card 1/3



There are 26 references, 16 Soviet, 6 U.S., 4 German. The 5 most recent U.S. references are: Mosher, W. A., J. Am. Chem. Soc., 62, 552 (1940); Pennke, M. R., Anal. Chem., 19, 700 (1947); Signaigo, F. K., Cramer, P. L., J. Am. Chem. Soc., 55, 3326 (1933); Poehr, F. G., Pennke, M. R., Industr. and Engng. Chem., 41, 1956 (1949); Kelso, R. G., Greenlee, K. W., Derfer, J. M., Boord, C. E., J. Am. Chem. Soc., 74, 287 (1952).

Card 2/3

ASSOCIATION: N. D. Zelinskiy Institute of Organic Chemistry of the Academy of Sciences of the USSR (Institut organicheskoy khimii imeni N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: May 30, 1958

Card 3/3

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755130003-6"

BELIKOVA, N.A.; KARGIN, V.A.; PLATE, A.F.; PLATE, N.A.; TAYTS, G.S.;
LYAMINA, I.N.

Synthesis and polymerization of 2-vinylbicyclo-(2,2,1)-heptane.
Neftekhimiia 1 no.2:218-223 Mr-Ap '61. (MIRA 15:2)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova i
Institut organicheskoy khimii AN SSSR im. N.D. Zelinskogo.
(Norbornane) (Polymerization)

PETROV, A.D.; PLATE, A.F.; CHERNYSHEV, Ye.A.; DOLGAYA, M. Ye.; BELIKOVA, N.A.; KRASNOVA, T.L.; LEYTES, L.A.; PRYANISHNIKOVA, M.A.; TAYTS, G.S.; KOZYRKIN, B.I.

Preparation of organosilicon derivatives of bicyclo [2.2.1] heptane. Zhur. ob. khim. 31 no.4:1199-1208 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii Akademii nauk SSSR.
(Bicycloheptane) (Silicon organic compounds)

TAYTS, M. Yu. "Influence of Generally Fractionated Cobalt Radiation and X-rays on the Activity of Some Enzymes of the Central Nervous Systems, Skeletal Muscle, and Liver." The lethality of x-irradiation was higher than cobalt-60 radiation. Cytochromoxidase activity was unstable or depressed in all cases. Lowered phosphorylase activity was more stable following x-irradiation, while succindehydrogenase activity increased following gamma-irradiation.

candidate dissertation listed in Meditsinskaya radiologiya, no. [illegible], 1964. The article did not state specifically what degree was awarded. The annotated titles deal with studies on radiation physiology, radiation biochemistry, combined trauma and the influence of radiation on regenerative processes, radiation microbiology and immunology, and radiation pharmacology.

TAYTS, M.Yu.

Activity of cytochrome oxidase in fractional irradiation by gamma rays of Co^{60}. Vestsi AN BSSR. Ser. biial. nav. no.2:69-72 '61. (MIRA 14:7)

(CYTOCHROME OXIDASE)
(GAMMA RAYS—PHYSIOLOGICAL EFFECT)

L 29835-66 EWT(m)

ACC NR: AP6012873 SOURCE CODE: UR/0205/66/006/002/0179/0184

AUTHOR: Cherkasova, L. S.; Koldobskaya, F. D.; Kukushkina, V. A.; Mironova, T. M.; Remberger, V. G.; Tayts, M. Yu.; Fomichenko, K. V.

ORG: Institute of Physiology, AN BSSR, Minsk (Institut fiziologii AN BSSR)

TITLE: Effect of neutron irradiation on tissue metabolism processes

SOURCE: Radiobiologiya, v. 6, no. 2, 1966, 179-184

TOPIC TAGS: neutron irradiation, radiation biologic effect, tissue physiology, ~~animal experiment~~ BIOLOGIC METABOLISM

ABSTRACT: In order to clarify the effect of neutron bombardment on carbohydrate, energy, and protein metabolism at relatively low doses, the changes in free and bound glycogen, glucose-1-phosphate, glucose-6-phosphate, fructose-1, 6-diphosphate, triose-phosphate, phosphopyruvate, ATP, creatine phosphate, phosphorylase, amylase, succinic dehydrogenase, respiratory quotient, and protein content were determined in the central nervous system, skeletal muscle, and liver of adult white rats 15 — 30 days after total body irradiation with neutrons having energies of 0.04 — 1.35 Mev (total dose of about 13 rad in 60 min).

Card 1/2 UDC: 577.391:539.125.5

L 29835-66
ACC NR: AP6012873

2

While the glycogen content of the brain increased temporarily at 15 days and then decreased progressively, that of muscle decreased only at 15 days. The synthesis of bound glycogen was definitely inhibited 30 days after irradiation, and disruption of the coordination of glycogen metabolism was shown by the phosphorylase and amylase values. There were no significant changes in the phosphorylated intermediates of carbohydrate metabolism, but the reactions from glucose-6-phosphate through fructose-1, 6-diphosphate to triose-phosphate seemed to be inhibited in the brain, while that from glucose-1-phosphate to glucose-6-phosphate was accelerated in skeletal muscle. The levels of ATP and creatine phosphate were unchanged in the brain and somewhat increased in muscle. Although the changes in succinic dehydrogenase and QO_2 were insignificant, there was some increase in protein synthesis 30 days after irradiation. The neutron flux was measured by L. N. Uspenskiy and I. V. Filyushin. Orig. art. has: 5 figures and 5 tables. [08]

SUB CODE: 06 / SUBM DATE: 14Nov64 / ORIG REF: 005 / OTH REF: 004
ATD PRESS: 5013

Card 2/2

TAYTS, N. S.

"Asbestosis as an Occupational Disease (Clinic and Working Capacity)." Thesis for degree of Cand. Medical Sci. Sub. 1 Nov 49, Central Inst for the Advanced Training of Physicians.

[redacted] Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

TAYTS, N.S. (Moskva)

Clinical picture and work capacity in telangiectasis. Klin. med. 32 no.6:84 Je '54. (MLRA 7:8)

1. Iz terapevticheskoy kliniki (nauchnyy rukovoditel' - prof. L.I.Fogel'son) TSentral'nogo nauchno-issledovatel'skogo instituta ekspertizy trudosposobnosti i organizatsii truda invalidov.
(TELANGIECTASIS
*clin. aspect. & work capacity in)

OLENEVA, V.A.; TAKTS, N.S.; NESTEROVA, A.P.

X-ray and electrogastrographic parallels in patients with peptic ulcers. Trudy VNIIMIO no.3:124-127 '63 (MIRA 18:2)

TAYTS, N.S., kand.med. nauk

Roentgenocardiological data on patients of different age groups recovered from myocardial infarction. Vrach. delo no.2:49-52 F'64 (MIRA 17:4)

1. Rentgenologicheskoye otdeleniye (zav. - doktor med. nauk P.D. Tarnopol'skaya) kliniki lechebnogo pitaniya (zav. - doktor med. nauk I.S.Savoshchenko) Instituta pitaniya AMN SSSR.

NESTEROVA, A.P.; OLENEVA, V.A.; TAYTS, N.S.

Use of vegetable fats in diet therapy of patients with peptic ulcer. Vop. pit. 23 no.2:54-59 Mr-Ap '64. (MIRA 17:10)

1. Otdel lechebnogo pitaniya (zav. - doktor med. nauk I.S. Savoshchenko) Instituta pitaniya AMN SSSR, Moskva.

GUSEV, L.K., kand. med. nauk; TAYTS, N.Yu., ordinator

Foreign bodies in the esophagus. Nauch. trudy SamMI 22:18-22 '63. (MIRA 17:9)

1. Iz kliniki obshchey khirurgii Samarkandskogo meditsinskogo instituta.

KARLENKO, P.N., prof.; GUSEV, L.K., kand.med.nauk; YENIKEYEVA, M.A., kand. med.nauk; OMIROV, R.Yu., aspirant; YUSUPOV, N.A.; ordinator; AZAMATOV, N.A., ordinator; TAYTS, N.Yu.; ASRIYANTS, N.G., ordinator; BORUKHOV, S.A., ordinator.

Some results of a study of goiter in Samarkand Province of the Uzbek S.S.R. Med. zhur. Uzb. no.5:17-20 My '61. (MIRA 14:6)

1. Iz kliniki obshchey khirurgii Samarkandskogo gosudarstvennogo meditsinskogo instituta imeni I.P.Pavlova.
(SAMARKAND PROVINCE—GOITER)

10

S

INVESTIGATION OF A TUBULAR METAL RECUPERATOR. M. Tayts and K. Gann'asenko. (Stal, 1940, No.4, pp. 25-28). (In Russian). The recuperator investigated comprised nineteen 1250 × 50 × 3·5 mm. tubes welded to two tube plates. The heating surface was 5·845 sq. m. It was intended for use with small heat-treatment furnaces. All the interior parts were of aluminised carbon steel. The working of the recuperator was investigated under the following conditions: (a) Using a constant volume of air and waste gas; (b) with a varying volume of air and waste gas and with the latter at different temperatures. The design was found to be satisfactory. In view of the small pressure loss of the waste gas on passing through the recuperator (1·5-2·5 mm. of water) an exhaust fan was not required.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PA 3T20

TAYTS, N Yu

USSR/Steel - Heat treatment Mar 1947

"Fundamentals of Rational Technology of Steel Heating," N Yu Tayts, 7 pp

"Stal'" Vol VII, No 3

Theoretical consideration of rational systems of heating steel. Saves time and increases productivity of the unit, economizes on fuel, provides for high quality production. Numerous graphs.

Dnepropetrovsk Metallurg. Inst.

3T20

TAYTS, N. YU.

42321. TAYTS, N. YU.--O raspredelenii temperatur v slitkakh pri raznykh sposobakh nagreva. Nauch trudy (Dnepropetr. metallurg. in-t im. Stalina), VYP 12, 1948, s. 168-80.

SO: Letopis' Zhurnal'nykh Statey, Vol 47, 1948.

TAYTS, N. YU.

42322. TAYTS, N. YU.- Opredeleniye dopuskayemoy temperatury pechi pri nagreve. Nauch. trudy (Dnepropetr. metallurg. in-t im. Stalina) VYP 12, 1948, s 181-91.

SO: Letopis'Zhurnal'nykh Statey, Vol. 47, 1948.

TAYTS, N. YU.

IA 159T66

USSR/Metals - Conductivity, Thermal Mar 50
Steel, Thermal Measurements

"Methods for Determination of the Temperature and Thermal Conductivities of Steels," N. Yu. Tayts, E. M. Gol'dfarb, Dnepropetrovsk Metallurgical Inst, 5½ pp

"Zavod Lab" Vol XVI, No 3

Describes procedure for determining thermal conduction coefficient of cast steel with equipment available in every plant laboratory. Method is based on solving differential equation of thermal conduction under condition of constant heating rate and of

[redacted] 159T66

USSR/Metals - Conductivity, Thermal Mar 50
(Contd)

existence of temperature difference at initial moment across the body. Accuracy of experiments is sufficient for structural calculations.

[redacted] 159T66

TAYTS, N. Yu. (Prof.)

"Heating and Melting of Metal," from the book Metallurgical Furnaces (Metallurgicheskiye Pechi) Metallurgizdat, 1951.

Doctor of Technical Sciences

TAYTS, Moy Yur'yevich; ROZENGART, Yuriy Iosifovich; KHMARA, S.M., otvetstvennyy redaktor; LIBERMAN, S.S., redaktor izdatel'stva; ANDREYEV, S.P., tekhnicheskiy redaktor

[Continuous heating furnaces] Metodicheskie nagrevatel'nye pechi. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 248 p. (MLRA 9:11)
(Furnaces)

SOV/137-57-10-18645

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 26 (USSR)

AUTHOR: Tayts, N. Yu.

TITLE: The Present Status of the Theory and Methods of Analysis of the Heating of Metal (Sovremennoye sostoyaniye teorii i metodov rascheta nagreva metalla)

PERIODICAL: Nauchn.-tekhn. o-va chernoy metallurgii, 1956, Vol 7, pp 268-291. Comments: pp 437-451

ABSTRACT Convection and radiation equations yielding virtually identical results are adduced to assist in determination of the length of time required to heat thin bodies in mediums of constant temperature. For more massive bodies, the solutions are arrived at for constant temperature in the heating medium, linear change in the temperature of the surface of the body, constant thermal flow through the surface, and constant thermal power of the furnace. For the case of heating in a medium at constant temperature, graphs are presented that make it possible, with given change in the temperature with time at any given point in a body, to determine the course of the heating at other points and also to calculate the physical properties of the

Card 1/2

SOV/137-57-10-18645

The Present Status of the Theory and Methods of Analysis (cont.)

body. The process of equalization of the temperature across the section of the body is examined both for conditions of constancy of temperature at the surface or in the furnace and for adiabatic conditions. If the heating of different sides of the body is unequal, its thickness, for purposes of calculation, is found with the aid of a factor of asymmetry, which is determined either in relation to the ratio of heat currents or with consideration of the distribution of temperature across the section of the body. 2, 3, and 4-stage schedules are recommended as practical heating regimens depending on the special features of the furnace design and the properties of the metal being heated. The suggested methods of calculation are based on 2nd-order boundary conditions (constancy of heat flow at the surface), wherein it is assumed that the temperature drop across the section of the body being heated also depends upon the instantaneous value of the heat current at the given moment of heating, as though this flow were truly constant. The possibilities for increasing the output capacity of heating furnaces are very great, if allowance be made for the fact that in fast-heating compartment furnaces, the heating of thin details proceeds at a time rate of 1 min/cm or less.

B.Z.

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755130003-6"

SOV/137-58-9-18378

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 24 (USSR)

AUTHOR: Tayts, N. Yu.

TITLE: Ways of Introducing Rapid Heating Methods (Puti vnedreniya skorostnykh metodov nagreva)

PERIODICAL: V sb.: Progressivn. metody shtampovki i kovki. Khar'kov, Oblizdat, 1957, pp 134-151

ABSTRACT: The basic laws governing the heating (H) of thin and massive bodies are examined, and conclusions on ways for speeding their H are stated. It is noted that in existing furnaces the rate of H is determined mainly by the structure and the conditions of the exploitation of the furnace rather than by the properties of the metal. Recommendations are given on the practical realization of the methods for an accelerated and rapid H and the acceleration of H in existing furnaces. The main designs and elements of multi-chamber furnaces for continuous rapid heating are examined.

1. Heat--Applications 2. Furnaces--Heating 3. Materials--Heating 4. Furnaces--Design

V. T.

Card 1/1

TAYTS, N. YU.

137-58-3-5115

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 92 (USSR)

AUTHORS: Tayts, N. Yu., Sitkovskiy, I. S., Minayev, A. N.

TITLE: High-speed Heating of Stock in Sectional Furnaces (Skorostnoy nagrev zagotovok v sektsionnykh pechakh)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1957, Nr 3, pp 75-85

ABSTRACT: A report on the results of an investigation carried out in a twin-chamber furnace of VNITI design, intended to establish thermal parameters essential in design of sectional furnaces, employed for continuous, high-speed heating of round stock (S) prior to broaching. S of steel 10, 15KhM, and 1Kh18N9T was subjected to heating. It is established that, when the operating region of the furnace is at a temperature of 1450°, the specific time required for the heating of round S 80-110 mm in diameter amounts to 0.95-1.15 min/cm. Compared with the standard continuous method the high-speed heating method reduces fume losses of metal by 47-60 percent and promotes a good uniformity of heating; the temperature difference throughout the cross section of the specimen does not exceed 10° at the time

Card 1/2

137-58-3-5115

High-speed Heating of Stock in Sectional Furnaces

of completion of the heating process. The mechanical properties of finished pipes obtained from S subjected to rapid heating exceed the GOST specifications and are comparable to the properties of pipes which were heated continuously.

V.F.

Card 2/2

GOL'DFARB, Emil' Mikhaylovich; KRAVTSOV, Aleksandr Feodos'yevich; RADCHENKO, Irina Ivanovna; ROZENGART, Yuriy Iosifovich; SEMIKHIN, Iosif Danilovich; TAYTS, Noy Yur'yevich, prof., doktor tekhn. nauk, red.; CHUMACHENKO, T., vedushchiy red.; BESPIATOV, R., tekhn. red.

[Calculations for heating furnaces] Raschety nagrevatel'nykh pechei. Pod red. N.IU. Taitsa. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1958. 421 p. (MIRA 11:8)

(Furnaces, Heating)

SOV/163-58-1-15/53

AUTHOR: Tayts, N. Yu.

TITLE: Method of Determining the Coefficient of the Temperature Conductivity in Steel and Other Materials (Metodika opredeleniya koeffitsiyentov temperaturoprovodnosti staley i drugikh materialov)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 1, pp 74-79 (USSR)

ABSTRACT: The proper heating of steel samples prior to their rolling, forging and other thermal processing requires knowledge of the heat-physical properties of the steel and of the coefficient of the temperature conductivity.
The following parameters are necessary for the determination of the temperature conductivity:

$$\frac{a\tau}{R^2}; \quad \frac{\Delta t_o}{t_1 - t_n^o}; \quad \frac{r_1}{R} \text{ and } \frac{r_2}{R}.$$

In the given values of $\frac{r_1}{R}$ and $\frac{r_2}{R}$ the temperature criteria are equal to

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SOV/163-58-1-15/53

Method of Determining the Coefficient of the Temperature Conductivity in Steel and Other Materials

$$\frac{t_1 - t_2}{t_1 - t_n^o} = F\left(\frac{a\tau}{R^2}; \frac{\Delta t_o}{t_1 - t_n^o}\right) \quad (7).$$

To calculate equation (7) and to graphically represent it t_1, t_2, t_n^o and Δt_o are measured, and $\frac{a}{R^2}$ is calculated. From the latter the coefficient of the temperature conductivity α is determined.

In the case that t_1 and t_2 are known the temperature may be calculated at any point of the body. The results of the calculation of the temperature conductivity in the steel samples with a diameter 180 mm are given in a table; also, a diagram for the determination of α in the cylinder with $\frac{r_1}{R} = 0,833$ and $\frac{r_2}{R} = 0$ is given.

This method makes it possible to determine temperatures not only on the surface of the sample but also at any point

Card 2/3

SOV/163-58-1-15/53

Method of Determining the Coefficient of the Temperature Conductivity in Steel and Other Materials

along the section, which otherwise is very difficult. There are 2 figures, 1 table, and 3 references, 3 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

SUBMITTED: October 5, 1957

Card 3/3

AUTHORS: Tayts, N. Yu., Gorshkov, Yu. F. SOV/163-58-3-21/49

TITLE: The Heating of a Massive Cylinder under Boundary Conditions of the Second Type (Nagrev pologo tsilindra pri granichnykh usloviyakh vtorogo roda)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 3, pp 120 - 128 (USSR)

ABSTRACT: In the present paper calculations of the heating of full cylinders on conditions of the second type are given for constant but unequal heat currents to the surface and into the interior of the cylinder. A general equation (6) $F_o = \frac{a\tau}{b^2}$ was devised for the determination of the heat conductivity in full cylinders. This equation is also used for the equation of the heat conductivity in the following cases: 1) Heat currents to the external surface and the internal surface are the same: $q' = q'' = q_c$ or $\omega = 1$. 2) Unilateral heating of the external surface $q''=0, \omega=0$. 3) On the conditions $\omega=0$, $b = 0$. With cylinders of infinite length, a diameter of 600 mm and a wall thickness

Card 1/2

of 100 mm the distribution of the temperature through the section of the cylinder was determined. The results are given in table 1. From the equation (9)

$$\rho = b\sqrt{\frac{K(1 + K\omega)}{K + \omega}}$$

may be seen that the length of the radius of the section at the lowest temperature increases with the increase of K and ω. The temperature minimum in the cylinder wall is determined by the equation (18). The dependence of the function $f(K, \Omega, \frac{r}{b})$ on K and $\frac{r}{b}$ at $\omega = 1$ and $\omega = 0$ is given in the diagrams 2,3,4 and 5. There are 5 figures and 4 references, hich are Soviet.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

SUBMITTED: December 24, 195-

Card 2/2

SOV/137-59-3-6965

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 291 (USSR)

AUTHORS: Tayts, N. Yu., Sitkovskiy, I. S.

TITLE: On the Problem of Redesigning Old Tube-welding Furnaces (K voprosu o rekonstruktsii trubosvarochnykh pechey staroy konstruktsii)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4-5, pp 135-142

ABSTRACT: The process of heating of skelps (S) in furnaces (F) of older design accounts for a considerable portion of the time required for the manufacture of one welded gas pipe. Nonuniformity in temperature throughout the length of the hearth constitutes the major drawback of the existing F's. Because heat is introduced at the front of the F and because the combustion products become cooler as they pass along the hearth, the rear of the F has a lower temperature. The temperature drop throughout the length of the F may vary from 60 to 280°C. In order to achieve uniform temperature of the S, it is necessary that its rear section be heated first before the entire S is charged into the F. To increase the productivity of the F's of butt-welding machines with stationary stands, the following measures are

Card 1/2

SOV/137-59-3-6965

On the Problem of Redesigning Old Tube-welding Furnaces

essential: 1) Elimination of nonuniformity of temperature in the F by means of installing appropriate numbers of burners or spray burner nozzles on both sides of the F in order to ensure adequate supply of heat throughout its entire length; 2) increase the temperature of the F's to the maximum permissible value under 1550°; 3) mechanization of operations of charging of S's into the F by means of installing a charging device at the rear of the F; the S's should be transported by means of a crane or a telpher, while their charging into the F should be accomplished with the aid of magnetic rollers; 4) installation of individual gas producers (1-2 per each F) supplying crude heated gases into the F; if available, natural gas should be utilized for heating of the F's; 5) utilization of heat from the waste gases in heating of air which is consumed during combustion and in production of steam with technologically acceptable parameters; 6) installation of inspection and measuring devices, gages, and control instruments on the F's.

M. K.

Card 2/2

133-58-5-30/31

AUTHORS: ~~Tayts, N. Yu.~~ Doctor of Technical Science, Rozengart, Yu. I., Candidate of Technical Science, Sorokin, A. A., Engineer, and Poletayev, B. L., Candidate of Technical Science

TITLE: High Temperature Preheating of Air in Radiation Recuperators (Vysokotemperaturnyy podogrev vozdukha v radiatsionnykh rekuperatorakh)

PERIODICAL: Stal', 1958, Nr 5, pp 472-479 (USSR)

ABSTRACT: The object of the paper is to give a theoretical analysis of heat exchange conditions in radiation recuperators in order to develop a method for their design calculations and the choice of optimal schemes of radiation recuperators for soaking pits. Theoretical equations for the determination of heat exchange in recuperators are given. On the basis of the equations four different schemes of radiation recuperators are compared:
1 - direct current recuperator with heating from two sides;
2 - counter-current recuperator with heating from two sides;
3 - direct current recuperator with heating on one side and
4 - counter-current recuperator with heating on one side.
It is concluded that for soaking pits the first scheme

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133-58-5-30/31

High Temperature Preheating of Air in Radiation Recuperators

is the most advantageous. An experimental recuperator (Fig.7) was designed and its operation investigated. The results of one heating with cold charge are shown in Fig.8. The preheating of air reached 650°C and the coefficient of heat transfer 45 K cal/m^2hr°C. The resistance of the whole air duct at 2500 m^3/hr was about 450 mm H_2O. Some deficiencies in the operation were noted: the destruction of welded joints and non-uniform heating of the surface of the tubes due to a non-uniform distribution of air. A second recuperator is being designed in which the above deficiencies will be removed.

There are 2 tables and 9 figures.

ASSOCIATIONS: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute), Zavod im. Dzerzhinskogo (Plant imeni Dzerzhinskiy)

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18(3)

AUTHORS: Rozengart, Yu. I., Tayts, N. Yu., Sorokin, A. A., Poletayev, B. L. SOV/163-59-1-17/50

TITLE: Investigation of the Performance of a Slit Radiation Regenerator (Issledovaniye raboty shchelevogo radiatsionnogo rekuperatora)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 1, pp 80-84 (USSR)

ABSTRACT: At present slit radiation regenerators are used to a large extent. They are composed of two cylinders. The combustion gases pass through the inside cylinder, the air streams through the annular duct between the cylinders. The Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Institute of Metallurgy) in collaboration with the metallurgicheskiy zavod im. Dzerzhinskogo (Metallurgical Plant imeni Dzerzhinskiy) designed a slit radiation regenerator for soaking pits. This type of regenerator differs from others described in publications by the feature of being provided with a bilateral heating of the walls. This is accomplished by a flue gas duct in the inside tube of the regenerator and between the outside tube and the regeneration chamber. The theoretical investigation (Ref 1) showed that by this method

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Investigation of the Performance of a Slit Radiation Regenerator SOV/163-59-1-17/50

of heating the efficiency of the regenerator is considerably increased. A test unit was erected in the above-mentioned works for the purpose of studying the regenerator in question. It was composed of a furnace with two interconnected chambers, a combustion chamber, and a regeneration chamber. The air supply of the test unit was provided by two VVD-8 high-pressure fans with 20 kw electric motors. The slit radiation regenerator with a heating surface of 21.6 m^2, intended for use with soaking pits and with a rated capacity of 2500 m^3/hour of air heated to a temperature of up to 700° was constructed of 5.5 mm EI417 steel sheet. The investigations were carried out at different temperatures of the flue gases entering the regenerator (varying between 800 and 1300°) with unilateral and bilateral heating and an uniflow direction of the flue gases and of the air. A counterflow arrangement of air and the flue gases at gas temperatures of 800, 900, and 1000° with bilateral heating was also investigated. V. A. Epshteyn, Engineer, and I. I. Kharybin assisted in the experiments. It was found that the regenerator tested operates with a high thermal efficiency within a wide range of gas temperature.

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The investigations substantiated the conclusions drawn from theoretical considerations concerning the high efficiency of such a regenerator with bilateral heating. The engineering data obtained for a wide range of flue gas temperature (from 800 to 1300°) indicate the advantages of using such regenerators in this range of flue gas temperatures. The experiments at the test stand are at present continued. The problem of the optimum flue gas distribution between the inside and the outside duct is investigated. The Dnepropetrovsk Institute of Metallurgy and the Stal'proyekt are at present engaged in developing a multi-tube type of radiation regenerators. There are 5 figures, 1 table, and 2 Soviet references.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Institute of Metallurgy)

SUBMITTED: June 27, 1958

Card 3/3

24(8) SOV/32-25-4-61/71

AUTHORS: Tayts, N. Yu., Professor, Doctor of Technical Sciences, Gol'dfarb, E. M.

TITLE: On the Problem of the Determination of the Thermal Diffusivity of Materials (K voprosu opredeleniya temperaturoprovodnosti materialov). (With Reference to the Article by L. A. Brovkin, Published in the Periodical "Zavodskaya laboratoriya", Nr 8, 1957)(Po povodu stat'i L. A. Brovkina, opublikovannoy v zhurnale "Zavodskaya laboratoriya", No 8, 1957 g.)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, pp 502 - 504 (USSR)

ABSTRACT: In connection with the article (Ref 1) it is stated that essential errors may occur in the determination of the coefficient of thermal diffusivity (CTD), if the effect of the Heat Exchange Intensity (HEI) on the amount of the delay (D) is not considered. Studies were made, and a qualitative evaluation of the errors inherent in the method (Ref 1) was established. It can be seen from table 1 that (HEI) has a very strong effect on (D). Further measurement results (Table 2) suggest that it is absolutely necessary in the determination of the (CTD) of a body (plate, cylinder , or

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On the Problem of the Determination of the Thermal Diffusivity of Materials. (With Reference to the Article by L. A. Brovkin, Published in the Periodical "Zavodskaya laboratoriya", Nr 8, 1957) SOV/32-25-4-61/71

sphere) at different temperatures to measure the temperature at two points of the cross section: at the axis, and at the point where the temperature equals the mean temperature of the body. There are 2 tables and 7 Soviet references.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

Card 2/2

RESHETNYAK, I.S.; TAYTS, N.Yu.

Asymmetrical heating of a rectangular prism. Izv.vys.ucheb.zav.; chern.met. no.7:198-205 '60. (MIRA 13:8)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Heat--Transmission)

S/133/60/000/007/014/016

AUTHORS: Tayts, N.Yu., Doctor of Technical Sciences; Kadinova, A.S., Engineer

TITLE: Thermotechnical Principles of the Spray Hardening of Tubes

PERIODICAL: Stal', 1960, No. 7, pp. 655 - 657

TEXT: The conventional hardening method in baths filled with a cooling medium cannot always ensure rapid and uniform cooling of the metal product, especially in large products, such as papers. The application of spray cooling appears to be more effective, because high speed and great uniformity are attainable, also in flow system production and the control is relatively simple. A description is given of the heat exchange taking place when applying spray cooling to oil pipes of high strength after being subjected to high-speed heating. The tests were carried out under industrial conditions with pipes of 73 x 9 mm from 36Г2С (36G2S) and 40Х (40Kh) type steels and partly in laboratories on pipe-branches of 73 - 63 mm in diameter and 3.5, 5, 7 and 9 mm wall thickness. In both test series the nozzle type cooling apparatus of the UkrNITI has been applied. The curves indicating the test results clearly show that at a constant water pressure (1.5 kg/cm^2)

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S/133/60/000/007/014/016

Thermotechnical Principles of the Spray Hardening of Tubes

the absolute value of cooling rate decreases and the range of metal temperature in which the cooling rate is the highest becomes narrower with an increase in the wall thickness. The tests carried out with pipes of 9mm wall thickness and under various water pressures show that an increase in pressure accelerates the cooling, as under higher pressure vapor is removed more quickly from the metal surface facilitating the direct contact with water. The coefficient of the heat exchange α (cal/m^2 . h^{o}C) has been defined by the following formula:

$$\alpha = \frac{3gc_p \ln \frac{t_o - t_w}{t_f - t_w}}{3\tau - \frac{gc_p\delta}{\lambda} \ln \frac{t_o - t_w}{t_f - t_w}} \quad (1)$$

(Abstactor's note: the subscript f (final) is the translation of subscript k (konechnaya), subscript w (water) that of subscript b (voda).) In equation (1): g = the relation between the weight and the surface of the pipe; c_p = average heat capacity of the metal within the range of cooling temperatures; τ = cooling time; λ = coefficient of heat conductivity; δ = pipe wall thickness; t_o and t_f = initial and final temperatures of the metal;

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Thermotechnical Principles of the Spray Hardening of Tubes

t_w = temperature of the water. The coefficient of heat exchange has been defined by formula (1) when taking the coefficient of solidity into consideration as pipes with walls 3 - 14 mm thick can be classified as "solid bodies", when exposed to rapid cooling. With the aid of α it is possible to calculate the cooling time for pipes with 3 - 14 mm wall thickness by the following formula:

$$\tau = \frac{gc_p}{\alpha\psi} \ln \frac{t_o - t_w}{t_f - t_w} \quad (2)$$

where = the coefficient of solidity, defined by the following formula:

$$\psi = \frac{1}{1 + Bi/(K_1 + 2)} \quad (3)$$

where K_1 = coefficient of form, Bi - criterion of Biot. When the cooling time is defined it is possible to calculate the optimum relation between the length of the spraying apparatus and that of the hardening surface assuming the water flow to be continuous A formula expressing this optimum relation is cited. There are 4 graphs, 1 diagram and 2 Soviet references.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (Ukrainian Scientific Research Institute for Pipes)

Card 3/3

TAYTS, N.Yu.; GOL'DFARB, E.M.; MINAYEV, A.N.

Heating of large ingots in soaking pits. Izv. vys. ucheb. zav.: chern. met. no.8:160-166 '60. (MIRA 13:9)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Steel ingots) (Furnaces, Heating)

KAPLAN, Veniamin Grigor'yevich; TAYTS, N.Yu., prof., doktor tekhn. nauk, retsenzent; POLETAYEV, L.B., kand. tekhn. nauk, retsenzent; ROZENGART, Yu.B., kand. tekhn. nauk, retsenzent; VESELKOV, N.G., red.; LANOVSKAYA, M.R., red. izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Adjustment and operation of metal heating furnaces] Naladka i ekspluatatsiia pechei dlia nagreva metalla. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 352 p. (MIRA 14:9)

(Furnaces, Heating)

S/137/62/000/003/097/191
A006/A191

AUTHORS: Tayts, N.Yu.; Kadinova, A.S.

TITLE: The depth of the quenched layer in jet-cooling of pipes

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 31, abstract 3D174 (V sb. "Proiz-vo trub", no. 5, Khar'kov, Metallurgizdat, 1961, 171 - 174)

TEXT: The authors analyze the advantages of the method of pipe jet-cooling as compared to the use of a bath. The depth of the quenched layer in jet-cooling depends on the mass of the work piece, water pressure and consumption, and the thermo-physical properties of the quenched metal. The depth of the quenched layer was estimated on the basis of characteristic cooling curves. The authors show the relationship between the distance from the internal to the external pipe surface and the temperature. With the aid of the critical cooling rate in the range of the structural transformations of the metal, the depth of the quenched layer can be determined; if necessary, water pressure and consumption can be regulated, so that the required depth of the quenched layer can be obtained.

N. Yudina

[Abstracter's note: Complete translation]

Card 1/1

GOL'DFARB, E.M., inzh.; TAYTS, N.Yu., inzh.; LEGOVETS, L.V., inzh.; SOROKIN, A.A., inzh.; CHECHURO, A.N., inzh.; POLETAYEV, B.L., inzh.; YAROSHEVSKIY, N.D., inzh.

Increasing the heat capacity of blast furnace air preheaters. Biul.TSIICHM no.4:9-13 '61. (MIRA 14:10)
(Blast furnaces) (Air preheaters)

BEZVERKHIY, P.A., kand.tekhn.nauk; KADINOVA, A.S., inzh.; TAYTS, N.Yu., doktor tekhn.nauk

Investigation of roller hearth furnaces for the normalization of electrically welded pipe. Stal' 21 no.12:1122-1124 D '61. (MIRA 14:12)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.
(Furnaces, Heat-treating)

TAYTS, Noy Yur'yevich; LIVSHITS, A.Ye., inzh., red.; YUSFIN, Yu.S., red.; ATTOPOVICH, M.K., tekhn. red.

[Technology of steel heating] Tekhnologiia nagreva stali. Izd.2., ispr. i dop. Moskva, Metallurgizdat, 1962. 567 p. (MIRA 15:6)
(Steel--Thermal properties)

S/170/62/000/006/004/011
B117/B138

AUTHORS: Tayts, N. Yu., Gubinskiy, V. I.

TITLE: Calculation of scale formation during heating and cooling of metal

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 5 no. 6, 1962, 32 - 37

TEXT: The authors suggest a method for calculating the formation of scale on metal surfaces to determine the optimum cooling conditions for wire rod after rolling. The method is based on the idea of scale formation owing to diffusion. From Fick's law, a differential equation was found to describe the rules of scale formation as a function of time: $dw/d\tau = D'/w$ (1), where $D' = D(C_{surf}/\alpha)$ is the rate constant of scale formation proportional to the diffusion coefficient (C_{surf} is the oxygen concentration at the oxide-gas boundary; α is the proportionality factor; w is the oxygen diffused). An analysis of this equation showed that the scale formation was proportional to the square root of the time of cooling and heating in the same temperature range, similar to the case of isothermal oxidation.

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Calculation of scale formation ...

S/170/62/000/006/004/011
B117/B138

After integration, dimensionless dependences were constructed suitable for calculating the scale formation during heating and cooling of metal in a medium of constant temperature. Calculations by this method were confirmed by experiments. The effect of the initial temperature and the cooling rate on the amount of scale was determined, and optimum cooling conditions were found, which reduce the waste of metal in scale considerably. There are 3 figures.

ASSOCIATION: Metallurgicheskiy institut, g. Dnepropetrovsk (Metallurgical Institute, Dnepropetrovsk)

SUBMITTED: September 6, 1961

Card 2/2

TAYTS, N.Yu.; TREGUBOV, V.V.; RUKAVISHNIKOV, S.A.

Investigating the phenomena of the oxidation of wheel steel during its heating for hardening purposes. Izv. vys. ucheb. zav.; chern. met. 5 no.8:170-174 '62. (MIRA 15:9)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Flame hardening) (Metallic films)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755130003-6"

GUBINSKIY, V.I.; MINAYEV, A.N.; TAYTS, N.Yu.

Investigating the process of wire rod cooling following rolling on a continuous mill. Izv.vys.ucheb.zav.; chern.met. 5 no.11: 128-132 '62. (MIRA 15:12)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Rolling (Metalwork))

S/133/62/000/001/006/010
A054/A127

AUTHORS: Tayts, N. Yu., Doctor of Technical Sciences, Kolesnik, B. P., Yankovskiy, V. M., Candidates of Technical Sciences, Kadinova, A. S., Kaufman, M. M., Engineers

TITLE: High-speed heat-treatment of drilling pipes

PERIODICAL: Stal', 22, no. 1, 1962, 57 - 60

TEXT: The thickness of drilling-pipe walls at the end parts is sometimes twice that of other tube sections. At the UkrNITI (N. K. Polyakova, Engineer) and PNTZ (A. D. Vovsina, Engineer, A. S. Shanina, Engineer, V. I. Kostin, Engineer) tests were carried out to study the high-speed heat treatment of drilling pipes (73 x 9 mm cross section, 6.5 - 7 m long) with upset ends. The pipes were made of 36Г2С (36G2S) steel (C: 0.39%; Mn: 1.71%; Si: 0.55%; S: 0.025%; P: 0.030%) and "45" grade steel (C: 0.49%; Mn: 0.70%; Si: 0.25%; S: 0.041%; P: 0.028%). The heating temperatures (°C-numerator) and the heating rates (°/sec., denominator) were:

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S/133/62/000/001/006/010
A054/A127

High-speed heat-treatment of drilling pipes

	36G2S	"45"
Hardening	$\frac{900-920}{4.0}$	$\frac{900-920}{4.0}$
Annealing	$\frac{640-680}{7.0}$	$\frac{550-600}{6.5}$

Mechanical tests revealed that the heat treatment improved the mechanical characteristics of the steel pipes, but the strength and ductility of the upset pipe ends was 10 - 30% lower than in the other pipe sections. To obtain uniform mechanical properties over the entire pipe length special measures have to be taken. To ensure uniform heating of all pipe sections, it is essential to attain the lowest possible temperature drop between the upset end and the remaining pipe. For this purpose two different processes have been established: a) preheating of the upset pipe ends, followed by heating of the whole pipe in a compartment furnace with overheating of the pipe body; b) heating of the pipe in the compartment furnace using a special method of heat distribution. With variant a), 2 removable inductors are mounted on the front stand of the hardening furnace, which

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A054/A127

High-speed heat-treatment of drilling pipes

heat the pipe ends to about 550 - 600°C, while, subsequently, the entire pipe is heated to 1,300°C in the compartment furnace. With variant b) the pipe body is heated to 1,000°C, the pipe ends to 760°C, at a furnace temperature of 1,400°C. If in the next compartments the furnace temperature is lowered to 900°C, the temperature of the upset pipe ends increases, while that of the pipe body cools down to the given temperature. This variant is to be preferred to the former. To ensure rapid cooling the upset pipe ends should be cooled by a sprayer from both sides. During hardening the pipes have to be rotated under the sprayer at a speed of at least 20 - 30 rpm. After this heat treatment the pipe geometry showed some degree of distortion, particularly ovalness. These effects could be eliminated by straightening at temperatures of 550 -680°C, when the strength of the pipes is somewhat lowered and their ductility increased. There are 6 figures, 1 table and 5 Soviet-bloc references.

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CHEKMAREV, A.P., akademik; TAYTS, N.Yu., prof., doktor tekhn.nauk; GALATOV, N.S., inzh.; GETMANETS, V.V., inzh.; SINITSA, I.I., inzh.; MINAYEV, A.N., kand.tekhn.nauk; GUBINSKIY, V.I., inzh.; GONCHAROV, Yu.V., inzh.

Reduction of scale formation on continuous wire rod rolling mills. Stal' 22 no.4:327-330 Ap '62. (MIRA 15:5)

1. Dnepropetrovskiy metallurgicheskiy institut i Krivorozhskiy metallurgicheskiy zavod.
(Rolling (Metalwork)) (Wire--Corrosion)

7

S/133/63/000/001/001/011
A054/A126

AUTHORS: Gol'dfarb, E. M., Goncharov, I. A., Sabel'nikov, A. G., Soroko, L. N., Tayts, N. Yu., Faynshteyn, I. G., Filonov, V. A. (Deceased), Yaitskiy, A. K.

TITLE: Investigation of the solidification of large rectangular-section ingots

PERIODICAL: Stal', no. 1, 1963, 22 - 25

TEXT: The heavy ingots used at the zavod "Zaporozhstal'" ("Zaporozhstal'" Plant) have a prismatic shape with various ratios of the side-dimensions. The solidification rates of such ingots have not yet been studied sufficiently. Tests were carried out to prove the accuracy of a new calculation method for this purpose, based on the geometrical addition of the solidification rates in various directions in these ingots. The width of the test ingots varied between 1,082 and 1,580 mm, their thickness between 610 and 750 mm and their height was 2,200 and 2,400 mm. Several measuring methods were used. In some tests the temperature was measured at the ingot-mold wall section by inserting chrome-nickel-aluminum

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thermocouples in three holes with a 60-mm diamter, at various heights. The thermocouples had special cases ensuring a reliable contact between the thermocouple soldering and the ingot-mold wall surface at distances of 30-120 and 210 mm from the inner surface. The temperature of the solidifying metal was also measured directly by a platinum-platinorhodium thermocouple, moreover, by a very simple sounding method by means of 10 to 12-mm diameter steel rods, pushed down to the solidifying layer of the ingot, hereby determining its depth. From the test results equations were established for calculating the temperature field and the internal and external wall temperatures of the ingot mold, the heat flow in the ingot-mold wall, the radiation coefficient for the gap between ingot-mold wall and ingot and, once these data were obtained, the ingot surface temperature could be calculated for any moment. There is a difference in the solidification rates of killed and rimming steel ingots, as the presence of gas bubbles in the latter decreases their specific weight from about 7,500 to 7,000 kg/m^3, which, in turn accelerates their solidification rate by about 7% as compared to that of killed steel. The tests also showed that the solidification of killed steel ingots is practically completed in the time between the end of pouring and the moment they are set in the soaking pit, whereas for rimming steel ingots the time allowed

for cooling is 40 minutes shorter than required for their total solidification. The rimming steel ingots are, therefore, now being kept in the pits a longer time to prevent the roll shops from being supplied with ingots which are not fully solidified. There are 3 figures and 1 table.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut i zavod "Zaporozhstal'" (Dnepropetrovsk Metallurgical Institute and "Zaporozhstal'" Plant)

KADINOVA, A.S.; KHEYFETS, G.N.; TAYTS, N.Yu.

Nature of heat transfer in spray cooling. Inzh.-fiz. zhur. 6 no.4:46-50 Ap '63. (MIRA 16:5)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut, Dnepropetrovsk.
(Heat—Transmission) (Cooling)

TAYTS, N.Ya.; GOL'DFARB, E.M.; SABEL'NIKOV, A.G.; YERESKOVSKIY, O.S.

Using the EI-12 electric integrator for the solution of two-dimensional nonstationery problems in the heat conduction theory. Izv. vys. ucheb. zav.; chern. met. 6 no.4:156-162 '63. (MIRA 16:5)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Heat—Conduction)(Integrators)

GOL'DFARB, E.M.; GONCHAROV, I.A.; SABEL'NIKOV, A.G.; SOROKO, L.N.; TAYTS, N.Yu.; FAYNSHTEYN, I.G.; FILONOV, V.A. [deceased]; YAITSKIY, A.K.

Investigating the solidification of large ingots of rectangular cross-section. Stal' 23 no.1:22-25 Ja '63. (MIRA 16:2)

1. Dnepropetrovskiy metallurgicheskiy institut i Zavod "Zaporozhstal'". (Steel ingots) (Solidification)

ROZENGART, Yu.I., kand.tekhn.nauk, dotsent; TAITS, N.Yu., doktor tekhn.nauk, prof.; SPIVAK, E.I., inzh.; SOROKIN, A.A., inzh.; POLETAYEV, B.L., kand.tekhn.nauk; KLIMENKO, G.P., inzh.; KOROTAYEV, M.M., inzh.; STRUCHENEVSKIY, B.B., inzh.

Investigating the performance of holding furnaces for nonoxidizing heating. Stal' 23 no.9:848-853 S '63. (MIRA 16:10)

1. Dnepropetrovskiy metallurgicheskiy institut, TSentroenergochermet, zavod im. Dzerzhinskogo i Gosudarstvennyy soyuznyy institut po proyektirovaniyu agregatov staleliteynogo i prokatnogo proizvodstva dlya chernoy metallurgii.

TAYTS, Noy Yur'yevich; ROZENGART, Yuriy Iosifovich; KHMARA, S.M., red.; KOMAROV, S.I., red.izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Continuous heating furnace] Metodicheskie nagrevatel'nye pechi. Izd.2., perer. i dop. Moskva, Metallurgizdat, 1964. 408 p. (MIRA 17:2)

VASHCHENKO, Aleksandr Ivanovich; GLINKOV, Mark Alekseyevich, prof., doktor tekhn. nauk; KITAYEV, Boris Ivanovich; TAYTS, Noy Yur'yevich

[Metallurgical furnaces] Metallurgicheskie pechi. Izd.2., dop. i perer. [By] A.I. Vashchenko i dr. Moskva, Metallurgiia. Pt.2. 1964. 343 p. (MIRA 18:3)

KLEYNER, M.K.; TAYTS, N.Yu.

Heating of slender bodies with linear variation in the water equivalent of the heating gases. Inzh. fiz. zhur. no.7:9-14 Jl '64 (MIRA 17:10)

1. Ukrainskiy trubnyy institut, Dnepropetrovsk.

ROZENGART, Yu.I.; TAYTS, N.Yu.; SPIVAK, E.I.; SOROKIN, A.A.; POLETAYEV, B.L.

Effect of sulfur on metal loss during heating. Izv. vys. ucheb. zav.; chern. met. 7 no.2:177-182 '64. (MIRA 17:3)

1. Dnepropetrovskiy metallurgicheskiy institut, TSentroenergometallurgprom i zavod im. F.E. Dzerzhinskogo.

TAYTS, N.Yu.; KADINOVA, A.S.

Solutions of the differential equation of heat conductivity for a hollow cylinder under boundary conditions of the first and third kinds. Inzh.-fiz. zhur. 7 no.5:88-91 My '64. (MIRA 17:6)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut, Dnepropetrovsk.

TAYTS, N.Yu.; GUBINSKIY, V.I.; GETMANETS, V.V.

Temperature conditions of metal rolling on continuous small shape and wire rod mills. Izv. vys. ucheb. zav.; chern. met. 7 no.7:147-152 '64 (MIRA 17:8)

1. Dnepropetrovskiy metallurgicheskiy institut.

TAYTS, N.Yu., doktor tekhn. nauk; KLEYNER, M.K., inzh.; ZAVALISHIN, Ye.K., inzh.; KALUGIN, Ya.P., inzh.; FALILEYEV, I.L., inzh.; KAGAN, N.I., inzh. [deceased]; Prinimali uchastiye: POPOV, V.N. inzh.; CHUYKOV, A.A., inzh.; MINUKHINA, L.N., inzh.; KHATSAREVICH, V.R., inzh.; TOLMACHEVA, I.A., inzh.; BAZHENOVA, V.N., inzh.

Technological and thermodynamic characteristics of strip heating for the continuous furnace welding of pipes. Stal' 24 no.8:746-750 Ag '64. (MIRA 17:9)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut, Ural'skiy nauchno-issledovatel'skiy trubnyy institut i Chelyabinskiy truboprokatnyy zavod.

VASHCHENKO, Aleksandr Ivanovich; GLINKOV, Mark Alekseyevich, prof., doktor tekhn. nauk; KITAYEV, Boris Ivanovich; TAYTS, Noy Yur'yevich

[Metallurgical furnaces] Metallurgicheskie pechi. Izd.2., dop. i perer. Moskva, Metallurgiia. Pt.2. 1964. 343 p. (MIRA 18:3)

TAYTS, N.Yu., doktor tekhn. nauk; ROZENGART, Yu.I., kand. tekhn. nauk

All-Union Conference on nonoxidizing and rapid heating of steel. Met. i gornorud. prom. no.1:76-77 Ja-F '64. (MIRA 17:10)

... heating of thin bodies when the water equivalent of the heating gases

... heating, thermodynamics

21

... Formulas are given for calculating the heating of a thin body

the formulas.
Orig. art. has: 14 formulas, 2 graphs.

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ACCESSION NR: AP5015238

SUBMITTED:

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755130003-6"

ROZENGART, Yu.I., dotsent, kand. tekhn. nauk; TAYTS, N.Yu., prof., doktor tekhn. nauk; SOROKIN, A.A., inzh.; POLETAYEV, B.L., kand. tekhn. nauk

Expansion of research on the nonscale heating of metal at the Dzerzhinskii Plant. Stal' 24 no.5:462-466 My '64. (MIRA 17:12)

1. Dnepropetrovskiy metallurgicheskiy institut i Dneprovskiy metallurgicheskiy zavod im. Dzerzhinskogo.

KLEYNER, M.K.; ZAYTS, N.Yu.

Determination of the optimum thermal and temperature conditions of a continuous furnace for fast heating of thin bodies. Inzh.-fiz. zhur. no.10:67-72 0 '64. (MIRA 17:11)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut, Dnepropetrovsk.

TAYTS, N.Yu.; SABEL'NIKOV, A.G.; GUBINSKIY, V.I.

Determining metal temperature during the deformation process. Izv. vys. ucheb. zav.; chern. met. 8 no.2:156-160 '65. (MIRA 18:2)

1. Dnepropetrovskiy metallurgicheskiy institut.

TAYTS, N.Yu.; TREGUBOV, V.V.; STETSENKO, A.M.; MILOV, I.I.; ZELENSKIY, V.D.

Scale formation during the heating of wheels in heat treating ring furnaces. Izv.vys.ucheb.zav.; chern.met. 8 no.6:159-162 '65. (MIRA 18:8)

1. Dnepropetrovskiy metallurgicheskiy institut.

TAYTS, N.Yu.; GOL'DFARB, E.M.; YERESKOVSKIY, O.S.; SABEL'NIKOV, A.G.; SAVEL'YEV, L.P.

Solving problems of unsteady heat conduction with type EI-12 electric integrators under second order boundary conditions. Izv. vys. ucheb. zav.; chern. met. 8 no.10:153-157 '65. (MIRA 18:9)

1. Dnepropetrovskiy metallurgicheskiy institut.

ROZENGART, Yu.I., dotsent, kand.tekhn.nauk; TAYTS, N.Yu., prof., doktor tekhn. nauk; EPSHTEYN, V.A., inzh.; LITOVCHENKO, Yu.K., inzh.; KHUDIK, V.T., inzh.; MININZON, R.D., inzh.

Study of nonoxidizing heating of alloy steels. Stal' 25 no.5:469-473 My '65. (MIRA 18:6)

1. Dnepropetrovskiy metallurgicheskiy institut i zavod "Dneprospetsstal'".

TAYTS, N.Yu., doktor tekhn. nauk; ASTSATUROV, V.N.

Heat-engineering peculiarities in controlling thermal conditions of holding furnaces with nonoxidizing heating. Met. i gornorud. prom. no.4:36-40 Jl-Ag '65. (MIRA 18:10)

TAYTS, N.Yu.; ASTSATUROV, V.N.

Applying a finite-difference approximation for the solution of nonlinear problems of heat conductivity. Izv. vys. ucheb. zav.; chern. met. 8 no.11:163-169 '65. (MIRA 18:11)

1. Dnepropetrovskiy metallurgicheskiy institut.

L 26392-66 EPF(n)-2/EWT(1)/ETC(m)-6

ACC NR: AP6007184 SOURCE CODE: UR/0170/66/010/002/0182/0187

AUTHORS: Kozinets, V. P.; Tayts, N. Yu.

55
B

ORG: All-Union Institute of the Pipe Industry, Dnepropetrovsk (Vsesoyuznyy institut trubnoy promyshlennosti)

TITLE: The heating of long objects in straight-through electric-contact apparatus

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 2, 1966, 182-187

TOPIC TAGS: heating, heat balance, steel, heat loss, integral equation, resistivity, electric resistance

ABSTRACT: A method of calculating the electric and heat parameters in straight-through electric-contact apparatus is described (see Fig. 1). The equation

$$K\Big|_0^{\tau_k} = \frac{1}{g^4+2h^2}\left(\frac{g}{2}\ln\left[\frac{\theta^2-g\theta+g^2/2-h}{\theta^2+g\theta+g^2/2+h}\right]-\frac{g^2-2h}{\sqrt{g^2+4h}}\times\right.$$

$$\left.\times\,\mathrm{arctg}\,\frac{2\theta+g}{\sqrt{g^2+4h}}-\frac{g^2+2h}{2\sqrt{4h-g^2}}\ln\left[\frac{2\theta-g-\sqrt{4h-g^2}}{2\theta-g+\sqrt{4h-g^2}}\right]\right)\Big|_{\theta_0}^{\theta_k}$$

is valid for most metals. The heating time is calculated by the formula

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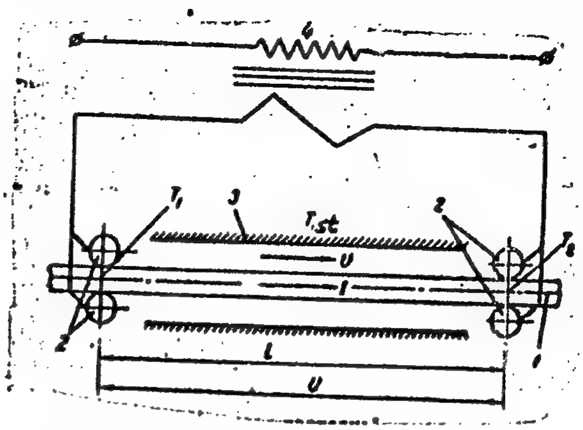
ACC NR: AP6007184

Fig. 1. Schematic diagram of apparatus.



$$r_x = \frac{c\gamma R}{9{,}8\sigma_s T_{ct}^3}(K_2 - K_1)$$

and the electric power introduced in segment 1 is calculated by the formula

$$W = \Omega H Q_{ss}.$$

The thermal efficiency of the process is

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L 26392-66

ACC NR: AP6007184

0

$$\eta = \Delta\theta / KH\Omega.$$

In the above formulas: K is the time number, Ω is the current number, R is the controlling dimension, θ_{Δ} is a number characterizing the resistivity, and H is the resistance number. The calculated and experimental data are compared for the example of heating a steel tape. The calculation errors are small. This method can be used to calculate the heating of objects of any material. Orig. art. has: 12 formulas and 1 figure.

SUB CODE: 20, 09/ SUBM DATE: 12Apr65/ ORIG REF: 005/ OTH REF: 002

Card 3/3

L 36372-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AR6009957 SOURCE CODE: UR/0137/65/000/012/D012/D012

AUTHOR: Kozinets, V. P.; Tayts, N. Yu. 52 B

TITLE: Heating rigidly fixed parts in an electrocontact unit

SOURCE: Ref. zh. Metallurgiya, Abs. 12D96 *

REF SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 44, 1965, 53-57

TOPIC TAGS: mathematic method, electric equipment, vacuum furnace, metal heat treatment, refractory alloy

ABSTRACT: A universal method has been proposed for calculating energy and thermal parameters in the heating of rigidly fixed parts with a constant cross section in high-temperature direct-action vacuum furnaces. The method is applicable for the calculation of heat treatment of different types of parts made of refractory and easily oxidized alloys of various grades. Differential equations and diagrams are given in the original article, providing the accuracy of approximate calculations with a maximum error of 5% and for more accurate calculations, 3.5%, for different heat treatments in determining the values of the voltage used. *(From RZh elektrotekn) [NT]
[Translation of abstract]

vacuum heat treatment 18

SUB CODE: 13, 11/

Card 1/1 UDC: 621.771.2

ACC NR: AR6017576 SOURCE CODE: UR/0196/66/000/001/N008/N008

AUTHOR: Kozinets, V. P.; Tayts, N. Yu.

9

TITLE: Overheating of permanently fixed parts in electrical contact devices

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 1N36

REF SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 44, 1965, 53-57

TOPIC TAGS: vacuum furnace, heat treating furnace

TRANSLATION: A universal method of calculating energy and thermal parameters in the overheating of permanently fixed materials of constant cross sections in high-temperature, direct-action vacuum furnaces is presented. This method can be used for calculations in the heat treatment of blanks of high melting alloys which oxidize readily. Differential equations and graphs are given to describe the accuracy of the calculations under various heating conditions with a maximum error of 5% in determining the applied potential and 3.5% in more exact calculations. V. Khristianovich.

SUB CODE: 13

UDC: 621.365.38:66.041.8

Card 1/1

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii,

[illegible] ... thin body

Card 2/2

L 61928-65

ACCESSION NR: AP5019915

tained for ellipsoids

$$\left(\frac{a}{b} = \frac{1}{3}\right)$$

show satisfactory agreement with the exact value of the potential. Orig. art. has:

Card